

Clegg hammer - California-bearing ratio correlations

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Abstract: This investigation was conducted to assess the efficacy of the Clegg impact hammer (CIH) for estimating the strength of compacted soils by conducting a comparative study between the California-bearing ratio (CBR) and CIH tests. The study was carried out in two phases. In phase 1, compacted marl samples were prepared in the laboratory under three different compactive efforts and different molding moisture contents and then subjected to CBR and CIH tests. Phase 2 focused on conducting in situ CBR and CIH tests on existing soils at some preselected locations as part of ongoing projects in Saudi Arabia. The test results of both phases were statistically analyzed and indicated that the Clegg impact value correlates relatively well with the CBR value for both the laboratory and field tests. These correlations were compared with those reported in the literature. A general, reliable, best-fit model has been proposed for the laboratory, field, and literature data. 2002 ©¹ The American Physical Society.